

[MEMORY DEVICE AND METHOD FOR FABRICATING THE SAME]

Abstract

A memory device and a method for fabricating the same are described. The memory device includes a substrate, buried bit lines, word line structures, a dielectric layer, conductive lines in trenches and self-aligned contacts. The buried bit lines are located in the substrate, and the word line structures are disposed on the substrate crossing over the buried bit lines. Each word line structure consists of a word line, a gate oxide layer, a capping layer and a spacer. Each conductive line is disposed in the dielectric layer and over a buried bit line, and crosses over the capping layers. The dielectric layer is disposed between the word line structures and between the conductive lines. Each self-aligned contact is disposed under a conductive line and between two adjacent word lines to electrically connect the conductive line and the corresponding buried bit line.